



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/697,977   | 10/31/2003  | Walter Wirz          | WIRZ5               | 8967             |
| 1444   | 7590        | 01/10/2005           | EXAMINER            |                  |
| BROWDY AND NEIMARK, P.L.L.C.<br>624 NINTH STREET, NW<br>SUITE 300<br>WASHINGTON, DC 20001-5303 |             |                      | ROGERS, DAVID A     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2856                |                  |

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/697,977             | WIRZ, WALTER        |
| Examiner                     | Art Unit               |                     |
| David A. Rogers              | 2856                   |                     |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 31 December 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-3 is/are rejected.

7)  Claim(s) 4-10 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 31 December 2003 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. Applicant is hereby reminded of their duty under 37 C.F.R. 1.56 to disclose any material information regarding this application or any foreign applicant, including the results of any search done on any related foreign application.

***Specification***

2. The disclosure is objected to because of the following informality. The specification (page 6, line 26) and Abstract refer to reference item 12. The Abstract also refers to reference item 15. Reference items 12 and 15 do not appear in the drawings as filed. Appropriate correction is required.

***Claim Objections***

3. Claims 4-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-10 not been further treated on their merits.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,987,591 to Jyumonji in view of United States Patent 4,891,889 to Tomelleri.

Jyumonji teaches that it is known to use a robot (reference item 40) to hold a laser sensor (reference item 10) for the non-contact measurement of a workpiece (reference item W). Furthermore, Jyumonji teaches that, in machining operations, laser sensors are beneficial in that they are effective in measuring position and shapes of the workpiece. Jyumonji also teaches that laser sensors are easy to mount to robotic arms, and that the detailed position and shape of the workpiece can be measured accurately in real-time. See Jyumonji, column 1, lines 14-21. Jyumonji does not teach the express use of a parallelogram linkage for the robotic arm.

Tomelleri teaches a robotic arm for holding a sensor. Tomelleri teaches that the apparatus is capable of carrying out the measurement or control of the position and orientation of characteristic spots or areas in structures or mechanical members accurately and in a short period of time (column 1, lines 51-59). The robotic arm (reference item 13) is formed as a parallelogram linkage, as seen in figure 1. This linkage comprises rods (reference items 13a and 13b) and pivots (reference item 5). The pivots allow the rods to swivel in a plane parallel to axis B-B. The probe (reference item 10) is attached to a probe

holder (reference item 14) and swinging head (reference item 15). The probe holder and swing head allow rotating motion about axes C-C and D-D.

In the case of measuring a machined workpiece, as in Jyumonji, it may not be necessary to utilize the second arm (reference item 12) of Tomelleri. Rather, the end opposite the probe holder of Tomelleri may be rigidly fixed so that rotations about axis B-B do not occur. See MPEP 2144.04 - the omission of an element and its function is obvious if the function of the element is not desired.

*In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired.)

*In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Jyumonji with the teachings of Tomelleri in order to provide an apparatus for measuring a machined workpiece where the apparatus comprises a parallelogram linkage attached to a probe holder.

### **Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Rogers whose telephone number is (571) 272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dan  
03 January 2004

*Hezron E. Williams*  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800